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Atty. Doc. No. 2001P07021WOUS

Amendments To the Claims:

Please amend the claims as shown. Applicant reserves the right to pursue any canceled claims at a later date.

1. (currently amended) A method for monitoring at least one measuring signal for predictive diagnosis and/or maintenance, comprising:

cyclically determining by a computer system a characteristic value of the measuring signal in measuring periods which are separated from one another by a time interval, wherein the characteristic value is the root mean square value of the measuring signal, the peak value of the measuring signal, or a value derived from a measured of the momentary value of the measuring signal;

automatically defining a priority to the measuring signal;

automatically assigning the priority to the measuring signal; and

automatically specifying a time interval between the measuring periods as a function of the priority; and

evaluating the measuring signal for executing diagnosis and/or maintenance measures.

2. (previously presented) A method according to Claim 1, wherein the priority is automatically defined as a function of the characteristic value of the measuring signal.

3. (previously presented) A method according to Claim 1, wherein the priority is automatically defined as a function of the size of the difference in the characteristic values of the measuring signal which were determined in two successive measuring periods.

4. (previously presented) A method according to claim 1, wherein the priority is automatically defined as a function of a trend analysis performed by the computer system of the characteristic values of the measuring signal which were determined in successive measuring periods.

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5. (previously presented) A method according to claim 1, wherein the measuring periods are embodied as discrete sampling instants and the characteristic values of the measuring signal are embodied as momentary values of the measuring signal.

6. (previously presented) A method according to Claim 1, for use in automation technology.

7. (previously presented) A method according to Claim 2, wherein the priority is automatically defined as a function of the size of the difference in the characteristic values of the measuring signal which were determined in two successive measuring periods.

8. (previously presented) A method according to claim 2, wherein the priority is automatically defined as a function of a trend analysis performed by the computer system of the characteristic values of the measuring signal which were determined in successive measuring periods.

9. (previously presented) A method according to claim 3, wherein the priority is automatically defined as a function of a trend analysis performed by the computer system of the characteristic values of the measuring signal which were determined in successive measuring periods.

10. (previously presented) A method according to claim 2, wherein the measuring periods are embodied as discrete sampling instants and the characteristic values of the measuring signal are embodied as momentary values of the measuring signal.

11. (previously presented) A method according to claim 3, wherein the measuring periods are embodied as discrete sampling instants and the characteristic values of the measuring signal are embodied as momentary values of the measuring signal.

12. (previously presented) A method according to claim 4, wherein the measuring periods are embodied as discrete sampling instants and the characteristic values of the measuring signal are embodied as momentary values of the measuring signal.

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13. (previously presented) A method for monitoring at least one measuring signal, for use in automation technology, in which method a computer system cyclically determines a characteristic value of the measuring signal in measuring periods which are separated from one another by a time interval, whereby

- a priority is defined automatically,

- said priority is assigned to the measuring signal and

- the time interval between the measuring periods is specified as a function of the priority, wherein

a measuring period has a length at least equaling the order of magnitude of a period of the measuring signal if the measuring signal is an alternating period signal, and wherein

a length of a measuring period is a discrete sampling instant at which a momentary value of the measuring signal is determined, the characteristic value including the determined momentary value if the measuring signal is a signal having an identical magnitude.

14. (previously presented) The method according to claim 13, wherein the priority is automatically defined as a function of a trend analysis performed by the computer system of the characteristic values of the measuring signal which were determined in successive measuring periods, wherein the trend analysis is based on fuzzy logic.

15. (new) A method for monitoring at least one measuring signal, for use in automation technology, in which method a computer system cyclically determines a characteristic value of the measuring signal in measuring periods which are separated from one another by a time interval, whereby

- a priority is defined automatically,

- said priority is assigned to the measuring signal and

- the time interval between the measuring periods is specified as a function of the priority, wherein

a length of a measuring period is a discrete sampling instant at which a momentary value of the measuring signal is determined, the characteristic value including the determined momentary value if the measuring signal is a signal having an identical magnitude.